

# Federal Register

Thursday  
June 14, 1984

---

## Part VI

## Department of Transportation

---

Research and Special Programs  
Administration

---

49 CFR Parts 173 and 178  
Standards for Polyethylene Packagings;  
Final Rule

## DEPARTMENT OF TRANSPORTATION

Research and Special Programs  
Administration

## 49 CFR Parts 173 and 178

[Docket No. HM-185; Amdt. Nos. 173-178,  
178-79]Standards for Polyethylene  
PackagingsAGENCY: Materials Transportation  
Bureau (MTB), Research and Special  
Programs Administration, DOT.

ACTION: Final rule.

**SUMMARY:** MTB is revising the Hazardous Materials Regulations (HMR) applicable to polyethylene packagings used for hazardous materials. These amendments are in response to both industry petitions for rulemaking and MTB's initiative in converting exemptions into regulations of general applicability. Major changes are as follows:

1. Section 173.24 is revised to establish permeation limits for hazardous materials in polyethylene packagings and receptacles and to require permanent marking of polyethylene packagings which are used for poisonous materials.

2. In Part 173, the 30 gallon capacity limitation for Specification 34 drums is removed and the use of Specification 34 drums is authorized for a number of materials previously authorized in polyethylene drums only under exemption.

3. Section 178.19 is revised to increase emphasis on performance requirements rather than detailed construction requirements and to authorize a maximum capacity of 55-gallons for Specification 34 polyethylene drums.

4. In Part 178, specifications for polyethylene packagings and receptacles are revised to eliminate detailed criteria pertaining to polyethylene resins and to clarify performance requirements.

The purpose of these amendments is to increase safety with regard to use of polyethylene packagings for hazardous materials, to clarify certain aspects of the HMR and to reduce the burden of regulatory compliance imposed under the terms of exemptions on manufacturers of polyethylene packagings and shippers who use these packagings.

**EFFECTIVE DATE:** October 1, 1984, except subparagraph (d)(3) of § 173.24 which contains information collection requirements which are under review at the Office of Management and Budget (OMB). After an OMB approval number

has been assigned, notice will be published in the Federal Register announcing the effective date of § 173.24(d)(3). Voluntary compliance with the regulations as hereby amended is authorized as of June 15, 1984.

**FOR FURTHER INFORMATION CONTACT:** Mario E. Gigliotti, Technical Division, (202) 755-4906, or Edward T. Mazzulla, Standards Division, (202) 426-2075, Office of Hazardous Materials Regulation, Materials Transportation Bureau, Department of Transportation, 400 Seventh Street SW., Washington, D.C. 20590.

**SUPPLEMENTARY INFORMATION:** On August 28, 1982, MTB published a notice of proposed rulemaking (Notice 82-7) in the Federal Register (47 FR 37582). In the notice, MTB proposed adoption of certain rules applicable to polyethylene packagings used for hazardous materials. This document contains changes to the Hazardous Materials Regulations (HMR) based on the proposals in Notice 82-7 and the merits of comments received from the public in response to the notice. The interested reader is referred to Notice 82-7 for additional background information.

MTB received 32 comments to Notice 82-7 from 25 respondents. Respondents represented 12 chemical shippers, six container manufacturers, one individual and six associations. The majority of commenters expressed support for the proposals, while offering comments and suggestions for improving specific aspects of the rulemaking. Only one commenter opposed the rulemaking, citing the lack of fire resistance standards in Specification 34 as a reason why MTB should not increase the authorized capacity for Specification 34 polyethylene drums from 30 to 55 gallons. Several commenters suggested changes to the proposals without expressing either support or opposition. Amendments adopted in this final rule and significant comments are discussed in the following paragraphs.

**Deletion of Obsolete Requirements, "Grandfather" Provision for Exemption Packagings (§ 173.23)**

There were no objections from commenters concerning deletion of obsolete specifications in paragraphs (a) and (b) of § 173.23. The change is made as proposed. Based on the merits of several comments, a new paragraph (a) is added. It provides that polyethylene drums which are manufactured and marked in accordance with various DOT exemptions may be used in place of Specification 34 drums, for those materials for which Specification 34 drums are authorized. The exemption

packaging must conform to all Specification 34 requirements, with the exception of the specification marking requirement and must be marked "DOT-34" in characters at least one half inch in height to identify it as an authorized package. Without this provision, these exemption polyethylene drums would be authorized for continued use only if their manufacturers periodically applied for, and received, renewal of the applicable exemptions. This amendment should result in a substantial savings to polyethylene drum manufacturers and shippers.

**Permeation and Compatibility Criteria (§ 173.24, Appendix A to Part 173)**

In Notice 82-7, MTB proposed standards for hazardous materials packaged in polyethylene packagings with regard to compatibility between the packaging and its lading and permeation of lading through the container. Eighteen commenters specifically addressed this proposal, most offering suggestions for revising the proposed standard.

One commenter suggested that the permeation and compatibility issue should be deferred for consideration under Docket HM-181, entitled "Performance-Oriented Packagings Standards" (ANPRM published April 15, 1982; 47 FR 16268) because of the complexity of the issue and its effect on polyethylene packagings. It is apparent that permeation and compatibility criteria may be essential to implementation of a performance oriented packaging system as envisioned in Docket HM-181, particularly if plastics other than polyethylene are permitted for construction of packagings for hazardous materials. However, MTB sees no reason for deferring action on the issue since the new standards will facilitate the use of 55 gallon polyethylene drums other than under the terms of exemptions and will fulfill an existing need for permeation and compatibility criteria applicable to polyethylene packagings.

The proposal in Notice 82-7 is adopted with changes based on the merits of comments and the MTB's own initiative. Maximum permissible rates of permeation of 0.5% for Poison B materials and 2.0% for other hazardous materials are specified. Three time and temperature combinations are specified for the test procedure: 14 days at 60°C (140°F), 28 days at 50°C (122°F) and 180 days at 18°C (64°F) or higher. The language of paragraph (d) of § 173.24 is revised to clarify that the permeation and compatibility criteria are standards rather than a requirement to test, and

the paragraph is revised editorially. The test procedure in Appendix B is revised to incorporate the suggestions of commenters. These changes and the reasons for them are discussed in greater detail in the following paragraphs.

The permeation and compatibility criteria which were proposed in Notice 82-7 are revised by using the language "Each polyethylene packaging \* \* \* must be capable of withstanding without failure the procedure specified in Appendix B \* \* \*" rather than the proposed language "The procedure specified in Appendix B \* \* \* shall be followed \* \* \*". This change responds to the requests of several commenters that MTB clarify that the criteria represent standards rather than a requirement to test, except in those instances where the specific packaging authorization in Part 173 requires testing. This change permits shippers to make a reasonable determination of compliance with the standard, in many instances without the need for actual testing, based on: (1) Successful shipping experience, (2) industry generated data concerning permeation and compatibility, (3) the shippers' knowledge of the material, or (4) testing performed on similar products. Actual testing is required for specifically named materials unless such testing has been performed for materials packaged in exemption packagings. The language is also revised so that approval by the Associate Director for Hazardous Materials Regulation is required only in certain instances such as use of test procedures other than that specified in Appendix B or use of packagings and materials which exceed the prescribed permeation rates but are known to be safe for transport.

One commenter contended that the permeation and compatibility criteria should not apply to small quantities of materials which are permitted to be shipped in nonspecification packagings, claiming a hardship would be imposed on users of such packagings. Another commenter contended that the criteria should not apply to inside plastic receptacles used in combination packagings. MTB disagrees with these commenters on the basis that incompatibility or permeation of hazardous material through a nonspecification packaging or an inside receptacle may be potentially just as hazardous as incompatibility or permeation through a specification packaging. Therefore, the adopted criteria apply to all polyethylene packagings and receptacles used for hazardous materials.

With regard to the proposed criteria, several commenters suggested a 180-day test period at ambient temperature as an alternative to the two proposed time-at-temperature combinations of 54.4 °C (130 °F) for 90 days and 80 °C (180 °F) for 14 days. This suggestion is consistent with the permeation criteria proposed in Docket No. HM-128 and is adopted in this final rule. Commenters suggested that testing for 14 days at 80 °C (180 °F) yields results roughly equivalent to testing for 180 days at ambient temperature. They contended that the time-at-temperature test of 90 days at 54.4 °C (130 °F) is not equivalent to either of the above mentioned time-at-temperature combinations. A test at 50 °C (122 °F) for 28 days was suggested as an appropriate alternative. This latter time-at-temperature combination is referenced in several industry standards for testing permeation and compatibility. MTB agrees with this suggestion and the final rule provides three alternative time-at-temperature combinations: 14 days at 80 °C (180 °F), 28 days at 50 °C (122 °F) and 180 days at 15 °C (59 °F) or higher.

Several commenters objected to the use of toxicity levels in the proposed criteria which differ from those found in 49 CFR 173.343. Commenters alleged that the proposed toxicity levels (i.e., oral toxicity of less than 20 mg/Kg (LD50, oral rat) and dermal toxicity of less than 80 mg/Kg (LD50, dermal rabbit)) are arbitrary and may require testing beyond that currently required to determine if a material meets Poison B criteria because of either oral or dermal toxicity (i.e., oral toxicity of 50 mg/Kg or less (LD50, oral rat) and dermal toxicity of 200 mg/Kg or less (LD50, dermal rabbit)). Based on the merits of these comments, MTB is revising the toxicity levels to be consistent with § 173.343, so that the lower permissible rate of permeation of 0.5 percent applies to hazardous materials which meet Poison B criteria. The higher rate of permeation of 2 percent applies to all other hazardous materials.

Several commenters proposed alternate rates of permeation ranging from 1 percent to 10 percent on a yearly basis. As indicated in the preceding paragraph, MTB is adopting maximum permissible rates of permeation of 0.5 percent for Poison B materials and 2.0 percent for other hazardous materials, determined over the time period of the test, which is roughly equivalent to 1 percent and 4 percent, respectively, per year. It is believed that these rates provide an acceptable level of safety, as evidenced through limited application under various polyethylene container

exemptions, without being overly restrictive as to the types of materials which may be packaged in polyethylene. One commenter contended that a general prohibition against hazardous conditions during transportation and handling is a greater inducement to safety than setting specific permeation limits. Another suggested that the shipper of hazardous material should be responsible for determining an appropriate rate of permeation. MTB disagrees with these commenters and believes that both a general prohibition against hazardous conditions and specified maximum permissible rates of permeation are necessary to provide regulatory guidance and achieve an acceptable level of safety.

The test procedure which was proposed for adoption in the notice is revised based on the merits of comments. Three samples are specified for conducting the permeation and compatibility test. The term "rate of permeation" is clarified and expressed as the percentage loss of hazardous material content during the time period over which the test is conducted. The format and language of the procedure are revised for clarity. One commenter suggested that a static compression test be required (after the storage test and prior to the drop test) and that test containers be cut apart for internal inspection after completion of testing. Another commenter proposed rejection criteria based on loss of tare weight during conduct of the storage test. These suggestions may have merit but since they go beyond the scope of testing proposed in Notice 82-7, they are not adopted in this final rule.

Several commenters recommended that MTB incorporate by reference *Packaging Institute, USA (PI/USA) Test Procedure T4101-80*. MTB has reviewed this test procedure and believes it to be unsatisfactory for incorporation by reference due to the use of recommendatory language and subjective failure criteria. It also appears to go beyond the scope of testing provided in Notice 82-7, in that it requires testing of both test coupons and whole containers and provides a limitless array of time and temperature combinations. The test procedure for whole containers (Part B) is roughly equivalent to the procedure adopted in this final rule, although *PI/USA T4101-80* does not prescribe maximum permissible rates of permeation. Two commenters proposed environmental stress crack resistance (ESCR) test procedures as base level tests for determining if different types and designs of polyethylene containers are

suitable as packaging for hazardous materials. Although the commenters differed in their recommendations, the test procedures generally involve placing an environmental stress crack agent into a polyethylene container for a specified period of time at a specified temperature. The container passes the test if it does not crack or leak. Another commenter proposed a compatibility test that is conducted at three different temperatures (CFC (32°F), 23.8°C (75°F) and 27.2°C (81°F)) over a two-year period by immersing test coupons of polyethylene, cut from the intended packaging, in the hazardous material which is to be packaged. Measurements of coupon material thickness and tensile strength are made at the beginning and end of the test period. Failure is defined as more than 5% loss of either material thickness or tensile strength. Although both of these proposed tests may have merit, MTB believes that they are beyond the scope of the proposals contained in Notice 82-7 and they are not adopted in this final rule.

#### Marking of Polyethylene Packagings Used for Poisonous Materials (§§ 173.24, 173.28)

In Notice 82-7, it was proposed to amend § 173.28(d) to require that polyethylene packagings used for Poison B materials be limited to Poison B materials in any subsequent reuse. Notice of this limitation was proposed to be accomplished by means of maintaining Poison labels on such containers. This proposal was based on a petition from the Society of the Plastics Industry (SPI) for a permanent marking on such containers which would include a skull and crossbones symbol and the warning "Contains Poison, Limit Reuse for Poison Only." Both proposals have the objective of warning reusers of containers of potential hazards. MTB initially believed that its proposal was a more cost effective means of accomplishing the safety objective. Comments addressed to this proposal appear to represent a consensus of polyethylene drum manufacturers and shippers and overwhelmingly favor a permanent marking requirement instead of the proposed provision for maintenance of Poison labels. Commenters accurately point out that it is difficult to maintain labels on empty packagings, particularly when the packaging undergoes a recleaning process. Implicit in these comments is that it is neither cost effective, nor effective from a safety standpoint, to require maintenance of labels instead of a permanent marking. Several marking alternatives were suggested; the SPI recommendation: just

the skull and crossbones symbol; the terms "Poison", "Contains Poison", and "Poison Do not re-use except for Poisons". MTB believes these comments have merit and has adopted a permanent marking requirement in this final rule. MTB believes that a minimal marking requirement using the word "Poison" is adequate for conveying notice of a potential hazard and is adding the requirement in § 173.24(d) for the permanent marking of polyethylene packagings used for poisonous materials. The word "Poison" must be marked in lettering of at least 1/4 inch in height. Additional text or symbols may be included with the required marking. A one year delay in the effective date of the marking requirement is provided to ease any burden that might arise from the new marking requirement. Paragraph (d) of § 173.28 is revised to clarify that permanent markings should not be removed. Also, a new paragraph (i) is added to § 173.28 which recommends that polyethylene packagings previously used for poisons be reused for poisons or hazardous wastes only.

One commenter suggested that all polyethylene packagings used for hazardous materials should be permanently marked in order to identify those packagings that have been in hazardous materials service. Although the proposal has some merit, such a requirement may not be justifiable in terms of cost, is controversial and is not adopted in this final rule.

One commenter supported the proposed limitation on reuse of polyethylene containers but suggested the limitation not apply to containers used as packagings for hazardous wastes destined for disposal. MTB agrees with this suggestion and has provided an exception in § 173.28(i) to permit for hazardous wastes, when authorized, regardless of whether the hazardous waste is a poisonous material.

#### Authorizations for Use of Specification 34 Polyethylene Drums (Part 173) and Elimination of Exemptions

Twelve commenters addressed the proposed Part 173 authorizations for use of Specification 34 polyethylene drums. There was strong support for revising the authorizations for use currently in the HMR (§§ 173.245, 173.263, 173.264, 173.265, 173.266, 173.272, 173.276, 173.277 and 173.288) to permit use of a 55 gallon maximum capacity Specification 34 instead of the previously authorized maximum capacities of 30 gallons or less. With the exception of § 173.245, these sections are changed as proposed in Notice 82-7. Because of the likelihood of previously untried corrosive liquids

being shipped in Specification 34 drums under the packaging authorization in § 173.245 (corrosive liquids, acids), MTB believes it is essential that compatibility between lading and containers be established prior to first shipment. Therefore, the authorization for use in § 173.245(a)(2) is revised both to permit use of a 55 gallon Specification 34 and to require the shipper to assure conformance with the permeation and compatibility criteria of § 173.24(d) prior to first shipment. This will necessitate testing in most instances. However, if testing has previously been performed for a given material and packaging by the shipper, the container manufacturer or a third party, then it need not be repeated.

MTB had proposed adding authorizations for use to 12 packaging sections, as follows: §§ 173.125, 173.247, 173.256, 173.257, 173.268, 173.271, 173.287, 173.348, 173.349, 173.357, 173.361 and 173.382a. There were no objections to the proposed changes to § 173.125 (alcohol, n.o.s.) and § 173.257 (alkaline and acid battery fluid) and these are changed as proposed.

One commenter pointed out that arsenic acid (§ 173.349), carbonic acid (§ 173.349), chloropicrin and chloropicrin mixtures (§ 173.357), alumin mixtures (§ 173.361) and diphenol solutions (§ 173.382a) are often dissolved in carrier solutions containing surfactants which may have deleterious effects on polyethylene. The commenter suggested that compatibility between lading and packaging should be established for these poisonous materials by actual testing prior to first shipment. MTB shares this commenter's concerns and, therefore, the final rule requires the shipper to assure conformance with the permeation and compatibility criteria of § 173.24(d) prior to the first shipment for these five materials. It should be noted that testing has been performed for many of these materials as a condition for their being authorized for shipment in Specification 34-type drums under various exemptions and, therefore, may not have to be repeated.

Several commenters suggested that perhaps the other materials should remain under exemption because of compatibility problems or inadequate shipping experience. The materials addressed are thionyl chloride; compound cleaning liquids containing more than 30% hydrofluoric acid; perchloric acid; phosphorous oxychloride; chromic acid solutions and chloropicrin. MTB notes that all of these materials have successful shipping experience under exemption and that there has been over one year of



additional experience required since comments were submitted in Notice 82-7. Based on this experience MTB does not believe it is necessary to prohibit use of Specification 34 for these materials. However, since it appears that these materials may require a higher degree of care in their packaging, MTB is requiring that the shipper assure conformance with the permeation and compatibility criteria of § 173.24(d) prior to first shipment. The requirement does not preclude use of test data generated by someone other than the shipper, such as by the drum manufacturer or another shipper, or the use of test data acquired under the terms of an exemption.

In Notice 82-7, MTB requested comments concerning materials or categories of material other than those proposed which may be suitable for shipment in Specification 34 drums. Several comments recommended adding authorizations to Part 173 for use of Specification 34 for the following materials, contending that some actual shipping experience has been acquired under the terms of exemptions. These materials are: flammable liquids with flash points above 20° F. (§ 173.119); paint (§ 173.120); organic peroxides, including those classified flammable liquid (§ 173.119, 173.221-223); hydrobromic acid not over 49% (§ 173.252); poisonous liquids, n.o.s. (§ 173.256); and cyanide solutions (§ 173.252). These materials are currently authorized in polyethylene drums under the terms of approximately 30 exemptions.

MTB agrees with commenters that some successful shipping experience has been demonstrated. However, it is noted that in some instances these materials generally have not been shipped under exemption for as long a period of time as the materials proposed in Notice 82-7 and that under provisions of many exemptions, materials are specifically identified to and acknowledged in writing by MTB's Office of Hazardous Materials Regulation (OHMR) prior to first shipment. Under this latter provision OHMR has required that permeation and compatibility testing be performed prior to first shipment. In order to achieve an equivalent level of safety as that provided under the exemptions program, MTB believes it is necessary to require the shipper to assure conformance to the permeation and compatibility criteria of § 173.24(d) prior to first shipment. Authorizations for use of Specification 34 are adopted in this final rule, for those materials named in the preceding paragraph, with this stipulation. One commenter recommended an across-the-board authorization to use Specification 34 for

any compatible material. In the absence of a demonstration of transportation safety through shipping experience gained under the terms of exemptions or international regulations, MTB is reluctant to expand authorizations for use beyond those discussed above and, therefore, no action is taken on the commenter's recommendation.

There are approximately 200 named materials (including trade names, generic names and "not otherwise specified" descriptions) authorized to be packaged in Specification 34 and 34-style polyethylene drums under the provisions of 49 CFR exemptions which are affected by this rulemaking.

The 49 exemptions are listed as follows:

DOT-E: 6397, 6637, 6706, 6726, 6767, 6800, 6883, 6956, 7035, 7062, 7072, 7082, 7220, 7249, 7502, 7538, 7682, 7788, 7888, 7933, 7940, 8051, 8067, 8168, 8197, 8247, 8301, 8339, 8438, 8468, 8488, 8499, 8499, 8537, 8585, 8708, 8798, 8929, 8888, 8906, 9014, 9054, 9115, 9149, 9252, 9253.

MTB has not made a detailed review of these exemptions to determine which authorizations for use of exemptions may be rendered unnecessary by this final rule. Some of these exemptions have many materials authorized (for example, two exemptions authorize 118 and 210 materials, respectively) and a one by one review of the material authorizations, to determine which might be eliminated, was not feasible. It is anticipated that exemption holders will not apply for renewal of those exemptions rendered obsolete upon expiration of the exemptions. Also, in some instances it may not be feasible for a polyethylene drum manufacturer to maintain an exemption if it is only needed for one or two materials. It appears probable that at least 13, and possibly as many as 42, exemptions will be rendered obsolete. Shipments under the remaining exemptions will be significantly reduced due to the packaging authorizations adopted in the final rule, but some exemptions will probably be continued in effect because they will still contain those packaging authorizations for materials such as low flash point flammable liquids which are not adopted in the final rule. In addition, three of the exemptions may be continued in effect because they authorize container thicknesses of less than 0.125 inches in specific locations for a drum of 55 gallons capacity whereas this final rule specifies a minimum wall thickness of 0.125 inches.

#### Container Specification Requirements (Part 173)

Twelve respondents submitted comments addressed specifically to the proposed changes to Part 173. Comments indicated support for the proposals, particularly with regard to the elimination of requirements relating to the physical composition and characteristics of polyethylene drums used in the manufacture of containers and the increase of the maximum authorized capacity of Specification 34 to 55 gallons. Detailed specifications for polyethylene drums are contained in §§ 173.16, 173.18, 173.22, 173.24, 173.26, 173.27, 173.33, 173.35 and Appendix B to Part 173. The proposed revision to the rule was intended to emphasize performance requirements, is adopted in this final rule. After the word "method" has been removed from the title of Specification 34, in recognition of other manufacturing techniques which may be used for the manufacture of polyethylene drums.

It has been determined that the vibration test procedure which appears in §§ 173.19-7, 173.21-3, 173.24-7, 173.27-4, 173.35-3, 173.35a-4 and 173.35-11 is technically incorrect in referring to "an amplitude of one inch." Such an amplitude imposes a more rigorous vibration test than is intended, and is not practicable. The correct terminology, as found in § 173.16-13(a)(2), is "a vertical double amplitude (peak-to-peak displacement) of one inch." This error is corrected in this final rule in the aforementioned sections. Since this change imposes no additional requirements and is a relaxation of an existing requirement, prior notice is deemed unnecessary.

Changes to requirements for packaging testing and the retention of retention are being considered under Docket HM-181 with regard to non-bulk specification packagings other than cylinders. One commenter has suggested that the changes in testing proposed in Notice 82-7 should be postponed for consideration under Docket HM-181. MTB notes that the test requirements proposed in Notice 82-7 are different from those envisioned under Docket HM-181 and that many changes to test requirements made in this final rule may be rendered obsolete by future rulemaking action under Docket HM-181. As there is no pressing need to change the existing requirements from the standpoint of safety, MTB is deferring action on this issue for consideration under Docket HM-181. Therefore, § 173.19 is revised in part, rather than in its entirety as proposed, in

order to implement the increase in capacity to 55 gallons, emphasize performance requirements, correct the language of the vibration test and make other editorial corrections. In Notice 82-7, MTB proposed minimum wall thickness of 0.125 inches for Specification 34 polyethylene drums of greater than 15 gallons capacity, with a thickness of 0.090 inches permitted in corners and undercuts. Several commenters contended that it is in the best interests of safety not to provide a reduction of material thickness in corners and undercuts. MTB agrees with this contention and the final rule requires a minimum wall thickness of 0.125 inches throughout the container. One commenter suggested that Specification 34 be revised to authorize rated capacities of up to 210 gallons. MTB considers this suggestion to be beyond the scope of this rulemaking.

It was proposed in Notice 82-7 to require that polyethylene resins used to mold containers be unused so as to prohibit the use of polyethylene resins made from reprocessed containers which previously might have been used as hazardous materials packagings. The proposal was supported by commenters. However, several commenters suggested that the proposal be revised to permit use of reground material (such as excess molding material or off-specification containers) from an ongoing manufacturing process. MTB agrees with this suggestion and the language in §§ 178.18-4(a), 178.19-2(a), 178.21-3(a), 178.24-2(a), 178.24a-3(a), 178.27-1(a), 178.35-2(a) and 178.35a-1(d) is revised accordingly.

#### Section-by-Section Summary of Changes

**Section 173.23.** Paragraph (b) is deleted to eliminate obsolete provisions and paragraph (a) is revised to permit use of DOT-34 style exemption polyethylene drums wherever Specification 34 drums are authorized for use.

**Section 173.24.** Paragraph (c)(9) is deleted, paragraph (d) is redesignated paragraph (e) and a new paragraph (d) is added specifying rates of permeation and chemical compatibility requirements for hazardous materials packaged in polyethylene, and requiring the permanent marking of polyethylene packagings used for poisonous materials with the word "Poison" in letters at least 1/4 inch in height.

**Section 173.28.** Paragraph (d) is revised to clarify that permanent markings should not be removed from used packagings and paragraph (i) is added to recommend that polyethylene packagings not be reused for anything other than poisons or hazardous wastes

if the packagings were previously used for poisonous materials.

**Section 173.119.** Authorizations for use of Specification 34 are added as paragraphs (b)(11) and (m)(19). The authorizations necessitate that the shipper assure conformance with the requirements of § 173.24(d) prior to first shipment.

**Section 173.125.** Authorization for use of Specification 34 is added as paragraph (a)(7).

**Section 173.128.** Authorization for use of Specification 34 is added as paragraph (a)(5). The authorization necessitates that the shipper assure conformance with the requirements of § 173.24(d) prior to first shipment.

**Section 173.221.** Authorization for use of Specification 34 is added as paragraph (a)(12). The authorization necessitates that the shipper assure conformance with the requirements of § 173.24(d) prior to first shipment.

**Section 173.222.** Authorization for use of Specification 34 is added as paragraph (a)(6). The authorization necessitates the conduct of permeation and compatibility testing, in accordance with § 173.24(d) prior to first shipment.

**Section 173.223.** Authorization for use of Specification 34 is added as paragraph (a)(7). The authorization necessitates that the shipper assure conformance with the requirements of § 173.24(d) prior to first shipment.

**Section 173.245.** Paragraph (a)(26) is revised to remove the 30 gallon limitation for Specification 34 and to require that the shipper assure conformance with the requirements of § 173.24(d) prior to first shipment.

**Section 173.247.** Authorization for use of Specification 34 is added as paragraph (a)(21). The authorization necessitates that the shipper assure conformance with the requirements of § 173.24(d) prior to first shipment.

**Section 173.256.** Authorization for use of Specification 34 is added as paragraph (a)(9). The authorization necessitates that the shipper assure conformance with the requirements of § 173.24(d) prior to first shipment.

**Section 173.257.** Authorization for use of Specification 34 is added as paragraph (a)(13).

**Section 173.262.** Authorization for use of Specification 34 is added as paragraph (a)(5). The authorization necessitates that the shipper assure conformance with the requirements of § 173.24(d) prior to first shipment.

**Section 173.263.** Paragraph (a)(28) is revised to remove the 30 gallon limit for Specification 34.

**Section 173.264.** Paragraph (a)(18) is revised to remove the 5 gallon limit for Specification 34.

**Section 173.265.** Paragraph (d)(6) is revised to remove the 30 gallon limit for Specification 34.

**Section 173.266.** Paragraph (b)(6) is revised to remove the 30 gallon limit for Specification 34.

**Section 173.269.** Authorization for use of Specification 34 is added as paragraph (a)(8). The authorization necessitates that the shipper assure conformance with the requirements of § 173.24(d) prior to first shipment.

**Section 173.271.** Authorization for use of Specification 34 is added as paragraph (a)(1). The authorization necessitates that the shipper assure conformance with the requirements of § 173.24(d) prior to first shipment.

**Section 173.272.** Paragraph (g) is revised to authorize use of Specification 34 for sulfuric acid in concentrations of 95 percent to 100.5 percent and paragraph (i)(9) is revised to remove the 30 gallon limit for Specification 34.

**Section 173.276.** Paragraph (a)(10) is revised to remove the 30 gallon limit for Specification 34.

**Section 173.277.** Paragraph (a)(6) is revised to remove the 30 gallon limit for Specification 34 and to authorize the use of vented closures for Specification 34.

**Section 173.287.** Authorization for use of Specification 34 is added as paragraph (b)(9). The authorization necessitates that the shipper assure conformance with the requirements of § 173.24(d) prior to first shipment.

**Section 173.288.** Paragraph (e) is revised to remove the 5 gallon limit for Specification 34.

**Section 173.346.** Authorization for use of Specification 34 is added as paragraph (a)(6). The authorization necessitates that the shipper assure conformance with the requirements of § 173.24(d) prior to first shipment.

**Section 173.348.** Authorization for use of Specification 34 is added as paragraph (a)(5). The authorization necessitates that the shipper assure conformance with the requirements of § 173.24(d) prior to first shipment.

**Section 173.349.** Authorization for use of Specification 34 is added as paragraph (a)(4). The authorization necessitates that the shipper assure conformance with the requirements of § 173.24(d) prior to first shipment.

**Section 173.352.** Authorization for use of Specification 34 is added as paragraph (a)(8). The authorization necessitates that the shipper assure conformance with the requirements of § 173.24(d) prior to first shipment.

**Section 173.357.** Authorization for use of Specification 34 is added as paragraph (a)(4). The authorization necessitates that the shipper assure

conformance with the requirements of §173.24(d) prior to first shipment.

**Appendix B to Part 173.** Appendix B is added to provide a procedure for determining chemical compatibility and rates of permeation.

**Section 178.16.** In §178.16-1, paragraph (c) is added to emphasize performance requirements and, in §178.16-4, paragraph (a) is revised to delete specifications for polyethylene resins and requirements for retaining data concerning melt index and density.

**Section 178.19.** The section title and §178.19-1 are revised for clarity and to emphasize performance requirements. §178.19-2 is revised to delete specifications for polyethylene resins. §178.19-3 and paragraph (c)(2) of §178.19-7 are revised to authorize a container capacity of 55 gallons and paragraph (c)(1) of §178.19-7 is revised to correct deficiencies in the vibration test.

**Section 178.21.** Paragraph (b) of §178.21-1 is added to emphasize performance requirements, the introductory text of paragraph (a) of §178.21-3 is revised to add a prohibition against using a polyethylene resin that has been used previously, paragraph (c)(4) of §178.21-3 is revised to correct deficiencies in the vibration test and Note 1 which follows paragraph (a) of §178.21-3 is deleted to remove specifications for polyethylene resins.

**Section 178.24.** The specification title and the title and text of §178.24-1(c) are revised for clarity and to emphasize performance requirements; prohibition against using a polyethylene resin that has been used previously is added and specifications for polyethylene resins are deleted in §178.24-2(a); and §178.24-7(a)(3) is revised to correct deficiencies in the vibration test.

**Section 178.24a.** In §178.24a-3, paragraph (c) is deleted and paragraph (a) is revised to add a prohibition against using a polyethylene resin that has been used previously and to delete specifications for polyethylene resins.

**Section 178.27.** In §178.27-1, Note 1 is deleted to remove specifications for polyethylene resins. Paragraph (a) is revised to add a prohibition against using a polyethylene resin that has been used previously and paragraph (b) is added to emphasize performance requirements. Paragraph (a)(3) of §178.27-4 is revised to correct deficiencies in the vibration test.

**Section 178.35.** The section title and §178.35-1 are revised for clarity; emphasis on performance requirements is added as §178.35-1(c); in §178.35-2, specifications for polyethylene resins are deleted and a prohibition against using a polyethylene resin that has been

used previously is added; and paragraph (a)(4) of §178.35-5 is revised to correct deficiencies in the vibration tests.

**Section 178.35a.** The section title and §178.35a-1 are revised for clarity, to delete specifications for polyethylene resins, require that resins may not have been used previously and to emphasize performance requirements. Paragraph (a)(3) of §178.35a-4 is revised to correct deficiencies in the vibration test.

**Section 178.133.** Paragraph (b) of §178.133-11 is revised to correct deficiencies in the vibration test.

**Appendix B to Part 178.** Appendix B, entitled "Specifications for Plastics," is deleted in its entirety.

This rule contains information collection requirements. Those requirements are contained in paragraph (d)(3) §173.24 and have been submitted to the OMB for review under the Paperwork Reduction Act (44 U.S.C. 3501 et seq.) This item will become effective only after an OMB approval number has been assigned. When this number is assigned, notice will be published in the Federal Register announcing the effective date of §173.24(d)(3).

#### List of Subjects

#### 49 CFR Part 173

Hazardous materials transportation, Packaging and containers.

#### 49 CFR Part 178

Hazardous materials transportation, Shipping container specifications.

In consideration of the foregoing 49 CFR Parts 173 and 178 are amended as follows:

### PART 173—SHIPPERS—GENERAL REQUIREMENTS FOR SHIPMENTS AND PACKAGINGS

1. In §173.23, paragraph (b) is removed and reserved, and paragraph (a) is revised as follows:

#### §173.23 Previously authorized packaging.

(a) Where the regulations specify Specification 34 polyethylene drums, a polyethylene drum manufactured and marked in accordance with a DOT exemption may be used if the polyethylene drum conforms to Specification 34 except for the specification marking required by §178.19-6(a)(2) of this subchapter and the drum is legibly marked "DOT-34" in characters at least one half inch in height in a location near the exemption marking.

(b) [Reserved]

2. In §173.24, paragraph (c)(9) is removed, paragraph (d) is redesignated

paragraph (e), and a new paragraph (d) is added as follows:

#### §173.24 Standard requirements for all packages.

(d) **Polyethylene packagings and receptacles.** (1) Polyethylene used in packagings and receptacles must be of a type compatible with the loading and may not be permeable to an extent that a hazardous condition occurs during transportation, handling or refilling.

(2) Each polyethylene packaging or receptacle which is used for liquid hazardous materials must be capable of withstanding without failure the procedure specified in Appendix B of this Part ("Procedure for Testing Chemical Compatibility and Rate of Permeation in Polyethylene Packagings and Receptacles") and the maximum rate of permeation of hazardous loading through or into the polyethylene packaging or receptacles may not exceed the following rates:—

(i) 0.5 percent for materials meeting the definition of a poison according to this subchapter and 2.0 percent for other hazardous materials, when subjected to temperatures no lower than 18°C. (64°F.) for 180 days in accordance with Test Method 1;

(ii) 0.5 percent for materials meeting the definition of a poison according to this subchapter and 2.0 percent for other hazardous materials, when subjected to a temperature no lower than 50°C. (122°F.) for 28 days in accordance with Test Method 2; or

(iii) 0.5 percent for materials meeting the definition of a poison according to this subchapter and 2.0 percent for other hazardous materials, when subjected to a temperature no lower than 60°C. (140°F.) for 14 days in accordance with Test Method 3.

(3) Alternative procedures or rates of permeation are permitted if they yield a level of safety equivalent to or greater than that provided by paragraph (d)(2) of this section and are approved by the Associate Director for HMR.

(4) Each polyethylene packaging used as an outside packaging for materials meeting the definition of a poison according to this subchapter shall be permanently marked, by embossment or other durable means, with the word "POISON" in letters of at least ¼ inch in height. Additional text or symbols may be included in the marking. The marking shall be located within six inches of the packaging's closure. The requirements of this subparagraph do not apply prior to September 1, 1985.

3. In § 173.28, paragraph (d) is revised and paragraph (i) is added, as follows:

**§ 173.28 Reuse of packagings (containers).**

(d) Packagings previously used for any hazardous material must have the old markings (other than markings which are required by this subchapter to be permanent) and labels, if any, thoroughly removed or obliterated before being used for other materials.

(i) Polyethylene packagings previously used for poisonous materials should not be reused for any materials other than poisonous materials or hazardous wastes.

4. In § 173.119, paragraphs (b)(11) and (m)(19) are added to read as follows:

**§ 173.119 Flammable liquids not specifically provided for.**

(b) \*\*\*

(11) Specification 34 (§ 178.19 of this subchapter). Polyethylene drum. The shipper shall assure conformance with the requirements of § 173.24(d) of this Part prior to first shipment.

(m) \*\*\*

(19) Specification 34 (§ 178.19 of this subchapter). Polyethylene drum. Authorized for flammable liquids which are also organic peroxides only. The shipper shall assure conformance with the requirements of § 173.24(d) of this Part prior to first shipment.

5. In § 173.125, paragraph (a)(7) is added to read as follows:

**§ 173.125 Alcohol, n.o.s. (flammable liquid).**

(a) \*\*\*

(7) Specification 34 (§ 178.19 of this subchapter). Polyethylene drum.

6. In § 173.128, paragraph (a)(5) is added to read as follows:

**§ 173.128 Paint and paint related material (flammable liquids).**

(a) \*\*\*

(5) Specification 34 (§ 178.19 of this subchapter). Polyethylene drum. The shipper shall assure conformance with the requirements of § 173.24(d) of this Part prior to first shipment.

7. In § 173.221, paragraph (a)(12) is added to read as follows:

**§ 173.221 Liquid organic peroxides, n.o.s., and liquid organic peroxide solutions, n.o.s.**

(a) \*\*\*

(12) Specification 34 (§ 178.19 of this subchapter). Polyethylene drum. The

shipper shall assure conformance with the requirements of § 173.24(d) of this Part prior to first shipment.

8. In § 173.222, paragraph (a)(6) is added to read as follows:

**§ 173.222 Acetyl peroxide and acetyl benzoyl peroxide, solution.**

(a) \*\*\*

(6) Specification 34 (§ 178.19 of this subchapter). Polyethylene drum. The shipper shall assure conformance with the requirements of § 173.24(d) of this Part prior to first shipment.

9. In § 173.223, paragraph (a)(7) is added to read as follows:

**§ 173.223 Peracetic acid.**

(a) \*\*\*

(7) Specification 34 (§ 178.19 of this subchapter). Polyethylene drum. The shipper shall assure conformance with the requirements of § 173.24(d) of this Part prior to first shipment.

10. In § 173.245, paragraph (a)(26) is revised to read as follows:

**§ 173.245 Corrosive liquids not specifically provided for.**

(a) \*\*\*

(26) Specification 34 (§ 178.19 of this subchapter). Polyethylene drum. The shipper shall assure conformance with the requirements of § 173.24(d) of this Part prior to first shipment.

11. In § 173.247, paragraph (a)(21) is added to read as follows:

**§ 173.247 Acetyl bromide; acetyl chloride; acetyl iodide; antimony pentachloride; benzoyl chloride; boron trifluoride acetic acid complex; chromyl chloride; dichloroacetyl chloride; diphenylmethyl bromide solutions; pyrosulfuryl chloride; silicon chloride; sulfur chloride (mono and di); sulfuryl chloride, thionyl chloride; tin tetrachloride (anhydrous); titanium tetrachloride; trimethyl acetyl chloride.**

(a) \*\*\*

(21) Specification 34 (§ 178.19 of this subchapter). Polyethylene drum. Authorized for thionyl chloride only. The shipper shall assure conformance with the requirements of § 173.24(d) of this Part prior to first shipment.

12. In § 173.256, paragraph (a)(9) is added to read as follows:

**§ 173.256 Compounds, cleaning, liquid.**

(a) \*\*\*

(9) Specification 34 (§ 178.19 of this subchapter). Polyethylene drum. The shipper shall assure conformance with the requirements of § 173.24(d) of this Part prior to first shipment.

13. In § 173.257, paragraph (a)(13) is added to read as follows:

**§ 173.257 Electrolyte (acid) and alkaline corrosive battery fluid.**

(a) \*\*\*

(13) Specification 34 (§ 178.19 of this subchapter). Polyethylene drum.

14. In § 173.262, paragraph (a)(5) is added to read as follows:

**§ 173.262 Hydrobromic acid.**

(a) \*\*\*

(5) Specification 34 (§ 178.19 of this subchapter). Polyethylene drum. The shipper shall assure conformance with the requirements of § 173.24(d) of this Part prior to first shipment.

15. In § 173.263, paragraph (a)(28) is revised to read as follows:

**§ 173.263 Hydrochloric (muriatic) acid; hydrochloric (muriatic) acid mixtures; hydrochloric (muriatic) acid solution, inhibited; sodium chlorite solution (not exceeding 42 percent sodium chlorite); and cleaning compounds, liquids, containing hydrochloric (muriatic) acid.**

(a) \*\*\*

(28) Specification 34 (§ 178.19 of this subchapter). Polyethylene drum.

16. In § 173.264, paragraph (a)(18) is revised to read as follows:

**§ 173.264 Hydrofluoric acid; white acid.**

(a) \*\*\*

(18) Specification 34 (§ 178.19 of this subchapter). Polyethylene drum. Authorized only for hydrofluoric acid not over 52% strength.

17. In § 173.265, paragraph (d)(6) is revised to read as follows:

**§ 173.265 Hydrofluorosilicic acid.**

(d) \*\*\*

(6) Specification 34 (§ 178.19 of this subchapter). Polyethylene drum.

18. In § 173.266, paragraph (b)(8) is revised to read as follows:

**§ 173.266 Hydrogen peroxide solution in water.**

(b) \*\*\*

(8) Specification 34 (§ 178.19 of this subchapter). Polyethylene drum. Each drum must have a vented closure to prevent accumulation of internal pressure and the head with the closure must be marked "Keep This End Up."

19. In § 173.269, paragraph (a)(8) is added to read as follows:

**§ 173.269 Perchloric acid.**

(a) \*\*\*

(8) Specification 34 (§ 178.19 of this subchapter). Polyethylene drum.



Authorized for perchloric acid not exceeding 50% strength only. The shipper shall assure conformance with the requirements of § 173.24(d) of this Part prior to first shipment.

20. In § 173.271, paragraph (a)(1) is added to read as follows:

**§ 173.271 Methyl phosphonic dichloride, phosphorus oxybromide, phosphorus oxychloride, phosphorus trichloride, and thiophosphoryl chloride.**

(a) \* \* \*

(1) Specification 34 (§ 178.19 of this subchapter). Polyethylene drum. Authorized for phosphorus oxychloride only. The shipper shall assure conformance with the requirements of § 173.24(d) of this Part prior to first shipment.

21. In § 173.272, paragraphs (g) and (i)(9) are revised to read as follows:

**§ 173.272 Sulfuric acid.**

(g) *Sulfuric acid concentration of greater than 95 percent to not over 100.5 percent:* Authorized packaging is described in paragraphs (i)(1)-(4), (6), (9), (14)-(22), and (29) of this section.

(i) \* \* \*

(9) Specification 34 (§ 178.19 of this subchapter). Polyethylene drum.

22. In § 173.276, paragraph (a)(10) is revised to read as follows:

**§ 173.276 Anhydrous hydrazine and hydrazine solution.**

(a) \* \* \*

(10) Specification 34 (§ 178.19 of this subchapter). Polyethylene drum. Authorized for hydrazine solution only.

23. In § 173.277, paragraph (a)(6) is revised to read as follows:

**§ 173.277 Hypochlorite solutions.**

(a) \* \* \*

(6) Specification 34 (§ 178.19 of this subchapter). Polyethylene drum. Authorized for not over 16% sodium hypochlorite solution only. Vented closures are authorized if head with closure is marked "Keep This End Up."

24. In § 173.287, paragraph (b)(9) is added to read as follows:

**§ 173.287 Chromic acid solution.**

(b) \* \* \*

(9) Specification 34 (§ 178.19 of this subchapter). Polyethylene drum. The shipper shall assure conformance with

the requirements of § 173.24(d) of this Part prior to first shipment.

\* \* \* \* \*

25. In § 173.288, paragraph (e) is revised to read as follows:

**§ 173.288 Chloroformates.**

\* \* \* \* \*

(e) Specification 34 (§ 178.19 of this subchapter). Polyethylene drum.

26. In § 173.346, paragraph (a)(6) is added to read as follows:

**§ 173.346 Poison B liquids not specifically provided for.**

(a) \* \* \*

(6) Specification 34 (§ 178.19 of this subchapter). Polyethylene drum. The shipper shall assure conformance with the requirements of § 173.24(d) of this Part prior to first shipment.

27. In § 173.348, paragraph (a)(5) is added to read as follows:

**§ 173.348 Arsenic acid.**

(a) \* \* \*

(5) Specification 34 (§ 178.19 of this subchapter). Polyethylene drum. The shipper shall assure conformance with the requirements of § 173.24(d) of this Part prior to first shipment.

28. In § 173.349, paragraph (a)(4) is added to read as follows:

**§ 173.349 Carboic acid (phenol) liquid.**

(a) \* \* \*

(4) Specification 34 (§ 178.19 of this subchapter). Polyethylene drum. The shipper shall assure conformance with the requirements of § 173.24(d) of this Part prior to first shipment.

29. In § 173.352, paragraph (a)(8) is added to read as follows:

**§ 173.352 Sodium and potassium cyanide solutions, and cyanide solution, n.o.s.**

(a) \* \* \*

(8) Specification 34 (§ 178.19 of this subchapter). Polyethylene drum. The shipper shall assure conformance with the requirements of § 173.24(d) of this Part prior to first shipment.

30. In § 173.357, paragraph (a)(4) is added to read as follows:

**§ 173.357 Chloropicrin and chloropicrin mixtures containing no compressed gas or Poison A liquid.**

(a) \* \* \*

(4) Specification 34 (§ 178.19 of this subchapter). Polyethylene drum. The shipper shall assure conformance with the requirements of § 173.24(d) of this Part prior to first shipment.

31. Appendix B to Part 173 is added to read as follows:

#### Appendix B—Procedure for Testing Chemical Compatibility and Rate of Permeation in Polyethylene Packaging and Receptacles

1. The purpose of this procedure is to determine the chemical compatibility and permeability of liquid hazardous materials packaged in polyethylene packaging and receptacles. Alternatives for this procedure are permitted as specified in § 173.24(d)(3) of this subchapter.

2. Compatibility and rate of permeation are determined by subjecting full size polyethylene containers (or smaller containers as permitted in paragraph 4 of this Appendix) and hazardous material lading to one of the following combinations of time and temperature:

a. Test Method 1: 180 days at a temperature no lower than 18°C. (64°F.)

b. Test Method 2: 28 days at a temperature no lower than 50°C. (122°F.)

c. Test Method 3: 14 days at a temperature no lower than 60°C. (140°F.)

3. Regardless of which test method is used, at least three sample containers shall be tested for each combination of hazardous material and size and design of container. Fill containers to rated capacity with the specific hazardous material (at the concentration to be transported) and close as for shipment. For the first and last 24 hours of storage under the selected test method, place the containers with closures downward, except that containers fitted with a vent are so placed on each occasion for five minutes only.

4. For testing under Test Method 2 or 3 in those instances where it is not practicable to use full size containers, smaller containers may be used. The small container shall be manufactured by the same process as the larger container (for example, using the same method of molding and processing temperatures) and be made of identical resins, pigments and additives.

5. Determine filled container weight or net weight of contents both before and after storage under the selected test method. Rate of permeation is determined from loss of hazardous materials contents, during the conduct of the test, expressed as a percentage of the original weight.

6. After storage under the selected test method, the container shall be drained, rinsed, filled to rated capacity with water and, with filled container at ambient temperature, dropped from a height of 1.2 meters (3.94 feet) onto solid concrete.

7. Each of the following constitute test failure:

a. Visible evidence of permanent deformation due to vapor pressure build-up or collapse of walls, deterioration, swelling, crazing, cracking, excessive corrosion, oxidation, embrittlement, leakage, rupture or other defects likely to cause premature failure or a hazardous condition.

b. For materials meeting the definition of a poison according to this subchapter, a rate of permeation in excess of 0.5% determined over the test period. For all other hazardous materials, a rate of permeation in excess of 2.0% determined over the test period.

**PART 178—SHIPPING CONTAINER SPECIFICATIONS**

(2) \* \* \*

32. In § 178.16, paragraph (c) of § 178.16-1 is added and paragraph (a) of § 178.16-4 is revised to read as follows:

**§ 178.16 Specification 35; non-reusable molded polyethylene drum for use without overpack; removable head required.**

**§ 178.16-1 Compliance.**

(c) Each drum must be capable of withstanding the performance tests prescribed in §§ 178.16-18 and 178.18-18 without failure.

**§ 178.16-4 Materials.**

(a) Drums shall be made of an injection molding grade of high density polyethylene resin which has not been used previously. Regrind from the same production process may be used.

33. In § 178.19, the title and §§ 178.19-1 and 178.19-2 are revised to read as follows:

**§ 178.19 Specification 34; reusable polyethylene drum for use without overpack. Removable head not authorized.**

**§ 178.19-1 Compliance.**

(a) Required in all details.  
(b) Each drum must be capable of withstanding the performance tests prescribed in § 178.19-7 without failure.

**§ 178.19-2 Material.**

(a) Drums shall be made of a polyethylene resin which has not been used previously. Regrind from the same production process may be used.

(b) Ultraviolet light protection shall be provided by impregnation of polyethylene with carbon black or other equally efficient pigments or inhibitors. These additives shall be compatible with lading and retain their effectiveness for the life of the drum.

(c) Other materials may be added provided they do not adversely affect the structural integrity of the drum.

**§ 178.19-3 [Amended]**

34. In § 178.19-3, the table is amended by removing the number "30" and inserting, in its place, "55".

35. In § 178.19-7, the second sentence of paragraph (c)(1) is revised by removing the words "an amplitude" and inserting in their place the words "a vertical double-amplitude (peak-to-peak displacement)". Also, the table in paragraph (c)(2) is revised as follows:

**§ 178.19-7 Tests.**

(c) \* \* \*

Marked (net) capacity not over (gallons)	Compression weight load pounds
2½ through 6½.....	600
15.....	1,200
30.....	1,800
55.....	2,400

36. In § 178.21, paragraph (b) of § 178.21-1 is added, the introductory text of paragraph (a) of § 178.21-3 preceding paragraph (a)(1) is revised, and Note 1 following paragraph (a) of § 178.21-3 is removed, as follows:

**§ 178.21 Specification 2T; polyethylene container.**

**§ 178.21-1 Compliance.**

(b) Each container must be capable of withstanding the performance tests prescribed in § 178.21-3 without failure.

**§ 178.21-3 Material.**

(a) Containers shall be made of polyethylene resin which has not been used previously. Regrind from the same production process may be used.

37. In § 178.21-3, the second sentence of paragraph (c)(4) is revised by removing the words "an amplitude" and inserting in their place the words "a vertical double-amplitude (peak-to-peak displacement)".

38. In § 178.24, the specification title, the title and text of § 178.24-1 and paragraph (a) of § 178.24-2 are revised, Notes 1 and 2 following paragraph (a) of § 178.24-2 are removed, and paragraph (c) of § 178.24-3 is added, as follows:

**§ 178.24 Specification 2U; molded or thermoformed polyethylene containers.**

**§ 178.24-1 General requirements.**

(a) Compliance is required in all details.

(b) Removable head containers and containers fabricated from film are not authorized.

(c) Each container must be capable of withstanding the performance tests prescribed in § 178.24-7 without failure.

**§ 178.24-2 Material.**

(a) Containers shall be made of a polyethylene resin which has not been used previously. Regrind from the same production process may be used.

**§ 178.24-3 Construction capacity.**

(c) Minimum rated capacity is one gallon.

**§ 178.24-7 [Amended]**

39. In § 178.24-7, the second sentence of paragraph (a)(3) is revised by removing the words "an amplitude" and inserting in their place the words "a vertical double-amplitude (peak-to-peak displacement)".

40. In § 178.24a, paragraph (c) of § 178.24a-3 is removed and paragraph (a) is revised to read as follows:

**§ 178.24a Specification 2E; inside polyethylene bottle.**

**§ 178.24a-3 Materials of construction.**

(a) Each bottle shall be made of a blow-molding grade of polyethylene resin which has not been used previously (except for regrind from the same production process) and shall be constructed so that it will maintain its shape when standing empty and open.

41. In § 178.27-1, Note 1 is removed, paragraph (a) is revised and paragraph (b) is added, as follows:

**§ 178.27-1 Material requirements.**

(a) Containers shall be made of polyethylene resin which has not been used previously. Regrind from the same production process may be used.

(b) Each container must be capable of withstanding the performance test prescribed in §§ 178.27-3 and 178.27-4 without failure.

42. In § 178.27-4, the second sentence of subparagraph (a)(3) is revised by removing the words "an amplitude" and inserting in their place the words "a vertical double-amplitude (peak-to-peak displacement)".

43. In § 178.35, the section title, §§ 178.35-1 and 178.35-2 are revised to read as follows:

**§ 178.35 Specification 2S; polyethylene container.**

**§ 178.35-1 General requirements.**

(a) Compliance is required in all details.

(b) Removable head containers are not authorized.

(c) Each container must be capable of withstanding the performance test prescribed in § 178.35-5 without failure.

**§ 178.35-2 Material requirements.**

(a) Containers shall be made of a polyethylene resin which has not been

used previously. Regrind from the same production process may be used.

44. In § 178.35-5, the second sentence of paragraph (a)(4) is revised by removing the words "an amplitude" and inserting in their place the words "a vertical double-amplitude (peak-to-peak displacement)".

45. In § 178.35a, the section title and § 178.35a-1 are revised as follows:

**§ 178.35a Specification 2SL; molded or thermoformed polyethylene container.**

**§ 178.35a-1 General requirements.**

(a) Compliance is required in all details.

(b) Removable head containers and containers fabricated from film are not authorized.

(c) Each container must be capable of withstanding the performance tests prescribed in §§ 178.35a-3 and 178.35a-4 without failure.

(d) Containers shall be made of polyethylene resin which has not been used previously. Regrind from same production process may be used.

**§ 178.35a-4 [Amended]**

46. In § 178.35a-4, the second sentence of paragraph (a)(3) is revised by removing the words "an amplitude" and inserting in their place the words "a vertical double-amplitude (peak-to-peak displacement)".

**§ 178.133-11 [Amended]**

47. In § 178.133-11, the second sentence of paragraph (b) is revised by removing the words "an amplitude" and inserting in their place the words "a vertical double-amplitude (peak-to-peak displacement)".

**Appendix B—[Removed]**

48. Appendix B to Part 178 is removed in its entirety.

**Authority:** (49 U.S.C. 1803, 1804, 1808; 49 CFR 1.53, and Appendix A to Part 1.)

**Note—**The Materials Transportation Bureau has determined that this document will not result in a major rule under terms of Executive Order 12291 or a significant regulation under DOT's regulatory policy and procedures (44 FR 11034) or require an environmental impact statement under the National Environmental Policy Act (49 U.S.C. 4321, et seq.). Based on limited information available concerning size and nature of entities likely to be affected, I certify that this final rule will not have a significant economic impact on a substantial number of small entities because the overall economic impact is minimal. A regulatory evaluation and environmental assessment are available for review in the Docket.

Issued in Washington, D.C. on June 11, 1984.

**L. D. Santman,**

*Director, Materials Transportation Bureau.*

[FR Doc. 84-15998 Filed 6-13-84; 8:45 am]

**BILLING CODE 4910-80-M**